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ABSTRACT

The objectives of the project were to (1) determine whether students making a subjective evaluation of other students will tend to grade their friends higher than others they do not know as well, (2) whether the use of an evaluation instrument reduces the subjectivitiy of student judgment, and (3) what differences there may be between a grade based on a general impression and one based on evaluating particular points. The research-instructor prepared an evaluation form for students to use in subjective grading of other students' performances on 12 points. The evaluators also furnished numerical scores of their overall impressions of the performances. It was found that students gave lower grades when using the evaluation instrument than on the general impression. Students also graded their friends higher by both methods. The study indicated that a more realistic evaluation can be obtained by using an instrument requiring evaluation of several specific points rather than basing the grade on a general overall impression. It was concluded than when an instructor wants assistance in subjective evaluations he may use student evaluations if an effective evaluation instrument is prepared and the students' evaluations are averaged with those of the instructor. Appendices include the instrument used, analysis sheets, summary of scores, and summary analysis sheets. (MP)

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FINAL REPORT

Project No. 11-029-151-226-C

RELIABILITY OF STUDENT EVALUATIONS OF STUDENT PERFORMANCE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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by

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Lakeshore Vocational, Technical and Adult Education District

Cleveland, Wisconsin

May, 1976

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Mini-Grant Research Project

Project No. 11-029-151-226-C

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Statement of Problem

When a student's performance must be measured subjectively, or when it is difficult to quantify, a better evaluation can usually be obtained if more than one person judges the presentation. Some teachers may feel that they are better qualified than anyone else to judge the student and assign a grade, but this attitude must be questioned.

For example, if a panel of three were to judge a speech contest, one member might be influenced by appearance, another by content and another by style. With or without a rating instrument, which would evaluate these specific points, the evaluations would probably balance out so that the highest grades would go to the students giving the best performance unless all of the judges were biased in the same direction. Obviously, a combined judgement should be superior to the judgement of an individual when an overall evaluation is desired.

When presentations requiring subjective analysis are made continuously during a school year, a typical classroom instructor is faced with a problem. The instructor can do the evaluation alone or can attempt to obtain the assistance of other instructors or even persons outside of the institution. However, this assistance is usually difficult to obtain on a continuing basis.

Another possibility is to have the students evaluate each other as well as having the performance evaluated by the instructor. The question than arises as to whether or not the students' appraisals

would be fair and honest. A reasonable assumption would be that the students' knowledge of each other would unduly influence their judgement. Specifically, if it could be assumed that they would tend to favor their friends and close acquaintances and downgrade those whom they disliked or with whom they were not well acquainted.

In many classes, students are graded on how well they perform certain tasks and it may be difficult, if not impossible, to set up criteria that can be measured objectively. If a subjective evaluation is necessary, the instructor may not wish to be the sole judge, especially if he has had the students in other classes. His knowledge of their behavior and abilities might influence his current evaluation.

If the instructor were to permit the other members of the class to participate in the evaluations, the problem is that these student evaluations might be too subjective and biased to be used in determining the final grade.

Objectives

The basic purpose of this project was to determine whether students, when making a subjective evaluation, tend to grade their friends and close acquaintances higher than others they do not know as well.

A secondary objective was to determine whether the use of an evaluation instrument by students reduces the subjectivity of their judgement. Specifically, an attempt was made to determine the difference between a grade based on a general overall impression of the presentation and one based on evaluating particular points.

Background Information

The reasearcher has, for four years, taught a course called Purchasing Negotiations which is part of the Materials Management Curricula at Lakeshore Technical Institute, Cleveland, Wisconsin.

In this course, students are trained in the negotiating skills needed by an industrial purchasing agent. A hands-on approach is used by having the students resolve conflicts through negotiation. The first half of the course consists, in addition to some lectures, of having students develop a situation in which they, as a representative of a manufacturer, have to negotiate a settlement with industrial buyers. The situations represent such typical problems as a price increase, poor quality, late delivery, etc. Other students are selected as the buyers' representatives and a negotiating session is then privately video-taped. The students are given fifteen to thirty minutes during which time they are to reach a mutually satisfactory agreement.

Students are required to provide the instructor privately with specific objectives they are trying to reach. For example, the manufacturer's representative may state that he is asking for an eighth percent price increase across the board but will settle for five percent, and the buyer may state that he will offer a two percent price increase but will settle for four percent. Obviously, these goals are incompatible and someone is going to have to make some concession if an agreement is to be reached. Usually other factors such as freight

absorption, packaging, quality control specifications, and so forth are introduced so that one item may be traded off for another. This is a real life situation and some kind of an agreement is usually reached.

When several sessions are completed, the tapes are played back before the entire class for discussion and critique.

Initially, the instructor was the sole judge and assigned a grade based on his general impression of their performance and how close the students came to achieving their stated objective. During the 1975 spring term, the instructor prepared a formal evaluation instrument which students used to evaluate the negotiating sessions. The participants did not grade themselves. Other students' evaluations were averaged with the mean of student evaluations counting one-third and the instructor's evaluation counting two-thirds on the grade of that presentation.

This is the background and the basis for the present investigation.

PROCEDURE

Before playing back a video-taped negotiation session for a critique and evaluation by the class, students were given the "Evaluation of Purchasing Negotiation Presentation" form, Exhibit One. It was explained that they were to grade the buyer and seller on 12 points, that these would be totaled and a simple average (mean) of all the student's evaluations calculated. This would then be averaged with the instructor's evaluations (50/50) to determine the grade on that particular presentation. The 12 criteria on the form were discussed so that all students would be more aware of the points to watch for during a playback period. They were instructed to keep notes on the back of the page and to complete the evaluation following a general critique.

The 12 criteria used for judging do not all have equal weight. Five have a possible score of ten, five a possible score of eight, and two a possible score of five; the total being 100. This instrument was used the previous year and was considered quite satisfactory.

The video-tape was then played, and upon conclusion, the students were asked to immediately give the buyer and seller a numerical score from zero to 100 based on their overall impression of the negotiating session and to write it at the bottom of the columns on the evaluation sheet. A general critique followed during which the instructor acted as the moderator but avoided making any positive or negative statements concerning the participants.

The students than completed the evaluation instrument, folded it in half and gave it to the instructor.

Originally there were 22 students in the class and each was to participate in two negotiating sessions. Due to drop outs, job outs, and absences during the critique, a total of 680 evaluations and 644 general impression scores were received. These were tabulated and the mean for the buyer and seller were calculated in order to determine a grade.

For the purpose of this report, the mean of both evaluations, one from the evaluation sheet and one from the general impression grade that each student gave, were calculated.

After all of the negotiating sessions had been evaluated, the students were given a survey sheet, Exhibit Two. This survey asked three questions regarding the relationship of the student to the other students in the class; 1) How much time do they spend together outside of class, 2) How long have they known him, and 3) How well are they acquainted. They were told that the instructor was doing a research project and needed the information and it had nothing to do with their grades and the course. It was explained that the information received would be kept confidential and be seen only by the instructor, and if they felt it was too personal, they had no obligation to complete the form. However, all of the students in the class completed the survey.

This completed the information gathering portion of the project.

Organization and Presentation of Data

After each video-tape session was evaluated, the scores were posted to two tally sheets, one for the scores from the evaluation instrument and one for the general impression scores. These tally sheets are not included in this report because they contained personal names in order to facilitate posting from the evaluation sheets which also used personal names. When all of the evaluations were complete, the mean of the scores each student gave was calculated.

The students' survey sheets were then analyzed. In order to obtain a numerical score for comparison purposes, values had to be assigned to the responses. Values were assigned as shown.

Name	How many hours do you spend with him per week outside of class?				How long have you known him?				How well are you acquainted with him?		
	None	Less than 1 hour	1 to 5 hours	More than 5 hours	Less than 6 months	6 months to 1 year	1 to 2 years	More than 2 years	A very close friend	A friend	Only as a classmate
	✓					✓					✓
			✓				✓			✓	
VALUE	0	1	2	3	0	1	2	3	4	2	0

6 8

It was decided the lowest total value possible would be zero, and the highest value would be ten. Because the purpose of the research is to determine if students will grade their close friends and those with whom they are well acquainted higher than those they do not know as well, the response "a very close friend" was given a value of four. The assumption was made that the students are likely to be more friendly with someone they spend five hours per week with than someone they never see outside of class; therefore, the response "more than five hours" was given a value of three. Finally, it was assumed that the longer they have known someone, the more likely they are to be friends; therefore, the response "more than two years" was given a value of three.

It is recognized that these assumptions will not hold true in every case. A person could know someone more than two years and totally dislike him or a person could be in contact with another for more than five hours and still not consider him a friend. However, when the values checked for each question are totaled, it does seem reasonable to assume that the student will be closer to those with the higher value total than to those with the lower total. It is upon this assumption that the analysis of the results are based.

The response values across were totaled as in the example and the three highest and three lowest totals for each evaluator noted. These totals were posted to the "f" column of an analysis sheet, Exhibit Three. The evaluator's I.D. number was recorded on the top line along with the mean 'm" of each of his evaluations, one from the evaluation instrument and one from his general impression scores. The I.D. numbers and the scores given to six students, three with the highest total values and the three

lowest total values, were posted. The mean "m" of each student's given scores was calculated, and the variance "v" from the mean of the evaluator's scores was posted. T-scores were not used because they would not provide any better comparisons than the variances between the means of the raw scores. The mean and variance for the combined scores for the top and bottom three were also calculated, and this was used to make the final comparison. Variance for the combined scores is circled on each analysis sheet.

When the analysis sheets were completed, a summary sheet was prepared, Exhibit Four. The evaluator's mean scores using the evaluation instruments were listed in descending order in one column, and the mean general impression scores from the same student were listed in another column. The difference "d" between the variance for the three students he "knows best" and the three students he "knows least" was posted next to the mean score. For example, a -5 indicates that he graded the three he "knows least" an average of five points lower than the three he "knew best."

Another column was added to this summary sheet to show the difference between the mean raw scores from the evaluation instrument and from the general impression scores.

For example, student No. 8837 gave an average score of 97 using the evaluation instrument and an average general impression score of 95 for a difference of negative two points. Whereas student 6678 did just the opposite and gave an average general impression score of 87, 14 points higher than the average score of 73 he gave using the evaluation instrument. It is interesting to note that students giving the lower average scores from the evaluation instrument generally gave considerable higher general impression scores.

ANALYSIS

A study of the "Summary of Analysis Sheets," Exhibit Four, reveals several points worth consideration.

When comparing the grades the students gave using the evaluation instrument to the general impression grades, it is apparent that they gave lower grades when using the evaluation instrument. The average grade from the evaluation instrument was 87.5 while the average grade from the general impression score was 91.1, a difference of 3.6 points. Equally important was the range. For the evaluation instrument, 17 grades ranged from 73 to 97, a spread of 24 points, while for the general impression scores the range was only from 85 to 95, a spread of only ten points.

This would seem to substantiate the point that when evaluating a performance on each of 12 different points, it is necessary to give more thought to the evaluation, and even though the question asked by each individual point to be considered is subjective in nature, a more realistic score will be obtained than by assigning a grade based on an overall impression.

A study of the difference between the grades a student gave those he "knows best" compared to those he "knows least" shows that the students do grade those they "know best" higher than those they "know least." Of 17 students, 13 gave higher grades to their "friends," the difference ranging from one point to 11 points higher; two showed no difference in their average grades; and two graded their "friends" lower by one point and five points. The average difference for the 17 students was a negative 3.4 points when using the evaluation instrument.

A similar condition exists when using the general impression scores. Of 17 students, 14 gave higher grades to their "friends," the difference being from one point to seven points; one graded both the same; and two graded their "friends" lower by one point and two points, respectively. The average difference was a negative 2.9 points for the general impression scores.

This is less than the negative 3.4 points average difference from the evaluation instrument scores and was anticipated due to the narrower range of grades.

Conclusion and Recommendations

This research tends to prove that when making a subjective evaluation, students grade those they know best higher than those they do not know as well. While this bias is relatively high for some individuals, for the class as a whole the difference is only negative 3.4 points. A previous, less comprehensive study showed a similar bias of negative 2.3 points. This bias is large enough to affect a student's grade but when averaged with the instructor's grade, the bias will be reduced by fifty percent as shown below.

The average grade from all of the students' evaluations was 87.5 and the average difference between those they know best and those they know least was a negative 3.4 points. The instructor's average grade for the same presentations was 84.1 points. Averaging these will give the following results:

	Know Most	Know Least	Difference
Students' Evaluation	87.5	84.1	-3.4
Instructors' Evaluation	84.1	84.1	
	171.6	168.2	
Average	85.8	84.1	-1.7

The study also indicated that a more realistic evaluation can be obtained by using an instrument requiring the evaluation of several different points instead of basing a grade on a general overall impression. A wider range of grades as well as a slightly lower average should be obtained by this method.

When an instructor wants assistance from others in grading a performance requiring subjective evaluation, this research shows that the instructor can use evaluations by other students in the class. If an effective evaluation instrument is prepared and the students' evaluations are averaged with those of the instructor, any personal bias in the students' evaluations will be minimuzed.

Student evaluations not only provide additional input to the instructor but give the students a greater sense of involvment and particiaption in the class.

TABLE OF EXHIBITS

1. Evaluation of Purchasing Negotiation Presentation
2. Student Survey
3. Sample Analysis Sheet
4. Summary of Analysis Sheets
5. Summary of Scores from Evaluation Instruments
6. Summary of General Impression Scores
7. Summary of Responses from Student Surveys
   a. Hours Per Week
   b. Length of Acquaintance
   c. How Well Acquainted
8. Summary analysis Sheets for 17 Students

Exhibit One

Purchasing Negotiation
104-192

Evaluation of Purchasing Negotiation Presentation Date _____

Fill in the names of the participants and sign your name. Circle the rating number you think applies to each criteria, one being the lowest rating. All evaluation scores will be tabulated and grade determined according to percentile rank. All evaluations will be kept confidential.

Names _____ Criteria _____	Buyer	Seller
How well were they prepared?	10 9 8 7 6 5 4 3 2 1	10 9 8 7 6 5 4 3 2 1
To what degree were they in control of the situation?	10 9 8 7 6 5 4 3 2 1	10 9 8 7 6 5 4 3 2 1
How successful were they in establishing a mood favorable to agreement?	10 9 8 7 6 5 4 3 2 1	10 9 8 7 6 5 4 3 2 1
How effective were the questions asked?	10 9 8 7 6 5 4 3 2 1	10 9 8 7 6 5 4 3 2 1
How well did they respond to the questions?	8 7 6 5 4 3 2 1	8 7 6 5 4 3 2 1
To what degree were alternate solutions proposed?	8 7 6 5 4 3 2 1	8 7 6 5 4 3 2 1
How well were they able to keep negotiations open and avoid a stalemate?	8 7 6 5 4 3 2 1	8 7 6 5 4 3 2 1
To what extent was there complete understanding of the final terms and conditions?	5 4 3 2 1	5 4 3 2 1
How effective were they in exploiting their strong points?	8 7 6 5 4 3 2 1	8 7 6 5 4 3 2 1
How effective were they in concealing their weaknesses?	8 7 6 5 4 3 2 1	8 7 6 5 4 3 2 1
How acceptable was their dress, speech and grooming?	5 4 3 2 1	5 4 3 2 1
How well did the accomplish their objective?	10 9 8 7 6 5 4 3 2 1	10 9 8 7 6 5 4 3 2 1

_____
Evaluator

Exhibit Two

None	How many hours do you spend with him per week outside of class?
Less than 1 hour	
1 to 5 hours	
More than 5 hours	
Less than 6 months	How long have you known him?
6 months to 1 year	
1 to 2 years	
More than 2 years	
A very close friend	How well are you acquainted with him?
A friend	
Only as a classmate	

ANALYSIS SHEET

mean of scores given each student

variance from mean of evaluator's scores

Evaluator's I.D. No.

factor from survey indicating how well evaluator is acquainted with the students. The three highest and lowest factors are listed.

I.D. Nos. of students evaluated

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
5080	m = 86						m = 85
6310	97, 85, 85, 83	88	+2	5	+3	88	85, 97, 85, 85
6632	89, 95, 79	88	+2	5	+2	87	90, 95, 75
2365	90, 88	89	+3	5	+3	88	90, 85
		88	(+2)		(+2)	87	
3566	75, 95	85	-1	2	0	85	75, 95
0972	78, 96	87	+1	2	+3	88	80, 96
5979	80, 72, 79	77	-9	2	-8	77	70, 80, 80
		82	(-4)		(-3)	82	

SUMMARY OF ANALYSIS SHEETS

I. D. No.	Evaluation Instrument Scores		General Impression Scores		Difference Between
	m_1	d_1	m_2	d_2	$m_2 - m_1$
8837	97	- 5	95	- 5	- 2
6310	95	0	93	- 4	- 2
8546	92	- 4	94	- 3	+ 2
3429	92	-11	93	- 5	+ 1
1484	91	+ 1	92	- 1	+ 1
2365	89	- 9	91	- 5	+ 2
2910	89	- 5	92	- 5	+ 3
9223	89	- 9	92	- 3	+ 3
0052	88	- 3	94	- 3	+ 6
3735	87	- 2	92	- 3	+ 5
5979	87	- 1	90	- 2	+ 3
5080	86	- 6	85	- 5	- 1
0972	86	0	93	+ 1	+ 7
8434	85	- 3	91	- 2	+ 6
9592	83	- 6	88	- 7	+ 5
6147	79	+ 5	88	+ 2	+ 9
6678	73	0	87	0	+14
m	87.5	-3.4	91.1	-2.9	+3.6
Instructor	84.1				

Exhibit Five

SUMMARY OF SCORES FROM EVALUATION INSTRUMENT

I.D. No.	1st Sess.		2nd Sess.		Totals	
	n	m	n	m	n	m
3566	18	79	18	86	36	83
6310	18	93	18	96	36	95
9223	19	89	10	89	24	89
9592	16	85	10	80	26	83
6632	12	78	6	90	18	82
2365	19	86	16	91	30	89
8546	20	90	18	94	38	92
2910	18	89	18	93	36	89
0972	16	82	18	89	34	86
5080	12	82	10	90	22	86
3409	16	91	18	93	34	92
6147	16	71	18	86	34	79
0052	18	86	18	89	36	88
6678	10	71	12	74	22	73
3735	20	84	18	90	38	87
6234	18	83	12	86	30	84
1129	18	71	18	89	36	80
8434	18	80	18	90	36	85
0355	10	83	0	0	10	83
8837	16	96	18	97	34	97
5979	18	84	18	90	36	87
1484	18	87	18	94	36	91
m	16	84	16	89	31	87

Explanation -

On the first session, student no. 3566 evaluated 18 presentations and the mean of his evaluations was 79, for the second session 18 and 86 and the total 36 and 83 respectively.

Exhibit Six

GENERAL IMPRESSION

SUMMARY OF SCORES

I.D. No.	1st Sess.		2nd Sess.		Totals	
	n.	m.	n.	m.	n.	m.
3566	18	94	16	93	34	94
6310	18	91	18	94	36	93
9223	14	92	10	91	24	92
9592	16	88	10	89	26	88
6632	4	78	6	91	10	86
2365	14	90	16	92	30	91
8546	20	94	18	94	38	99
2910	14	90	18	94	32	92
0972	12	92	18	94	30	93
5080	12	80	10	91	22	85
3429	16	83	18	93	34	93
6147	14	85	18	91	32	88
0052	18	92	18	95	36	94
6678	10	83	14	90	24	87
3735	20	92	16	92	36	92
6234	14	91	12	89	26	90
1129	16	88	18	90	34	89
8434	16	89	18	92	34	91
8838	16	96	18	94	34	95
5979	18	89	18	91	36	90
1484	18	89	18	94	36	92
m	15	89	16	92	31	91

Explanation -

On the first session, student no. 3566 scored 18 presentations and the mean of his scores was 94. For the second session, 16 and 93 and the total 34 and 94 respectively.

Exhibit Seven a

SUMMARY OF RESPONSES FROM STUDENT SURVEY

How many hours per week do you spend with him outside of class?

I.D. No.	None	Less Than One Hour	1-5 Hours	More Than Five Hours
3735	7	3	10	1
0052	3	2	6	10
0972	8	12	1	0
8546	5	9	6	1
2365	4	2	14	1
9223	5	7	7	2
6310	3	4	1	13
8837	5	3	9	4
1484	8	3	8	2
5080	0	20	1	0
8434	6	2	13	0
3429	6	6	6	3
9592	5	9	7	0
5979	14	4	3	0
6147	8	9	4	0
6678	0	20	1	0
2910	4	7	7	3
	91	122	104	40
T=357	25.5%	34.2%	29.1%	11.2%
Value	0	1	2	3

Explanation -

Student No. 3735 checked responses as follows regarding how many hours per week he spent with the other students outside of class.

None	7
Less than 1 hour	3
1 to 5 hours	10
More than 5 hours	1

Exhibit Seven b

SUMMARY OF RESPONSES FROM STUDENT SURVEYS

How Long Have You Known Him?

I.D. #	Less Than 6 Mos.	6 Mos-1 Yr.	1-2 Yrs.	More Than 2 Yrs.
3735	0	7	12	2
0052	0	3	16	2
0972	5	14	1	1
8546	1	5	15	0
2365	0	8	12	1
9223	3	15	3	0
6310	2	4	13	2
8837	1	7	13	9
1484	2	3	16	0
5080	0	6	15	0
8434	5	3	11	2
3429	1	3	17	0
9592	0	5	16	0
5979	0	18	1	2
6147	1	17	2	1
6678	0	1	17	3
2910	0	20	1	0
T=357	21	139	178	19
	5.9%	38.9%	49.9%	5.3%
Value	0	1	2	3

Explanation -

Student No. 3735 checked responses as follows regarding how long he had known the other students.

Less than 6 months	0
6 mos. to a yr.	7
1 yr. to 2 yrs.	12
More than 2 yrs.	2

SUMMARY OF RESPONSES FROM STUDENT SURVEY

How well are you acquainted with him?

I. D. No.	Close Friend	Friend	Classmate
3735	1	13	7
0052	13	3	5
0972	0	7	14
8546	1	12	8
2365	0	10	11
9223	0	6	15
6310	3	11	7
8837	7	9	5
1484	2	5	14
5080	0	14	7
8434	1	11	9
3429	0	17	4
9592	0	13	8
5979	0	4	17
6147	0	5	16
6678	1	3	17
2910	0	4	17
	29	147	181
T=357	8.1%	41.2%	50.7%
Value	4	2	0

Explanation -

Student No. 3735 checked responses as follows regarding how well he was acquainted with the other students.

Close Friend	1
Friend	13
Classmate	7

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
8837	m = 97						m = 95
2365	99,100,99,99	99	+2	9	+3	98	95,100,98,98
8434	96,97,99,100	97	ø	9	+1	96	98,95,95
0052	100,98,99,100	99	+2	9	+3	98	95,100,95,100
		98	(+1)		(+2)	97	
3566	90,92,100,99	95	-2	1	-1	94	90,95,94,95
6678	86,95,79	87	-10	1	-8	87	75,95,90
9223	100,98	99	+2	1	+3	98	98,98
		93	(-9)		(-3)	92	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
6310	m = 95						m = 93
6234	96, 100	98	+3	9	+7	100	100, 99
9592	74, 99, 89, 87, 92	88	-7	9	-4	89	88, 90, 85, 85, 95
0052	99, 99	99	+4	8	+4	97	95, 98
		93	(-2)		(-0)	93	
1129	97, 93, 96, 99	96	+1	2	+1	94	90, 99, 90, 95
9223	94, 66, 93, 98	88	-7	1	-11	82	90, 93, 55, 90
6147	95, 97, 98, 93	96	+1	1	-0	93	89, 98, 90, 99
		93	(-2)		(-4)	89	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
8546	m=92						m=99
2365	99,98,97,93	97	+5	6	+9	98	97,98,98,97
6632	93,94,99,100	97	+5	6	+3	97	97,97,97,97
9592	95,88,78,90	88	-4	6	-4	90	85,92,90,93
		94	(+2)		(+1)	95	
1489	90,88,89,95	88	-4	2	-4	90	90,89,85,96
5979	92,98,96,97	96	+4	1	+2	96	94,95,96,97
6678	84,97,81,85	87	-5	1	-3	91	95,90,90,87
		90	(-2)		(-2)	92	

	Scores f om evaluation instrument	m	v	f	v	m	General impression scores
3429	m = 92						m = 93
0052	96,97,100,100	98	+6	7	+3	96	95,95,95,98
8837	79,99,89,91,83	87	-5	7	-9	89	85,89,95,85,90
8546	99,100,90	95	+3	6	+1	94	95,90,98
		93	(+1)		(-0)	93	
1129	69,90,100	86	-6	2	-1	92	80,90,98
5080	70,79	75	-17	1	-10	83	85,80,
6678	74,93	84	-8	0	-5	88	85,90
		82	(-10)		(-5)	88	

	Scores from evaluation instrurent	m	v	f	v	m	General impression scores
1484	m = 91						m = 92
6234	87,98	93	+2	9	+2	99	98,90
9592	83,79,85,75,89	82	-9	6	-9	88	85,95,85,90,85
5979	97,100	99	+8	6	+5	97	95,98
		88	(-3)		(-1)	91	
6147	91,99,93,83	92	+1	1	+2	94	98,95,93,90
9223	97,99,83,72	87	-4	1	-7	85	93,96,70,80
1129	98,96,77,87	90	-1	0	-1	91	95,95,90,85
		89	(-2)		(-2)	90	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
2365	m = 89						m = 91
5979	95,93	94	+5	7	+3	94	93,95
3735	90,90,91	90	+1	6	0	91	90,92,92
1484	98,95,9994	96	+7	6	+4	95	95,95,95,96
		94	(+5)		(+3)	94	
3929	78,86,87	84	-5	2	-3	88	90,88,85
1129	90,89,79	86	-3	1	0	91	90,90,92
6678	95,74	85	-1	1	+1	90	85,95
		85	(-1)		(-2)	89	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
2910	m = 89						m = 92
8434	87,94,95,95	93	+4	6	+2	94	97,99,90,88
8837	86,94,98,96	94	+5	5	-8	84	97,88,75,79,81
9223	88,95,95	93	+4	4	-2	90	97,97,90,75
		93	(+4)		(-3)	89	
3566	80,85,93,95	88	-1	1	-8	84	91,100,71,73
5080	88,95,95	93	+4	1	-2	90	97,97,90,75
6678	83,80,87	83	-6	1	-14	78	69,87,62,92
		88	(-1)		(-8)	84	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
9223	m = 89						m = 92
2365	98, 92	95	+6	7	+2	94	90, 98
5979	94, 93	94	+5	6	+1	93	93, 93
3735	94, 87	91	+2	5	+1	93	90, 95
		93	(+4)		(+1)	93	
3566	90, 88, 82	87	-2	1	-3	89	90, 88, 90
9592	96, 78, 91	88	-1	1	-0	92	90, 93, 99
6678	67, 93, 71, 87	80	-9	1	-4	88	83, 93, 90, 85
		84	(-5)		(-3)	90	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
0052	m = 88						m = 94
8434	92, 89, 88, 89	90	+2	10	-1	93	92, 93, 94, 92
8837	85, 93, 79, 87, 77	84	-4	9	-2	92	90, 94, 91, 90, 95
2365	92, 88,	90	+2	9	+4	98	97, 98
		87	(-1)		(-1)	93	
9223	70, 99, 91, 88	75	-13	3	-10	84	96, 95, 60, 85
6678	86, 91, 83, 89	87	-1	3	-1	93	88, 98 94, 91
1129	84, 92, 95, 89	90	+2	1	+1	95	97, 93, 95, 92
		84	(-4)		(-4)	90	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
3735	m = 87						m = 92
6632	87, 88, 88, 93	89	+2	7	+3	95	92, 96, 97
9592	68, 81, 90, 87	82	-5	6	-1	91	88, 91, 92, 92
2910	88, 88, 90, 93	90	+3	6	+3	95	96, 92, 96, 97
		87	0		+2	94	
5080	80, 66, 91, 95	83	-4	2	+1	93	93, 97, 90, 92
0972	86, 86, 88, 88	87	0	1	0	91	92, 90, 90, 92
6678	81, 89, 79, 91	85	-2	1	-3	89	85, 91, 90, 90
		85	-2		-1	91	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
5979	m = 87						m = 90
2365	89,86	88	-1	7	+5	95	95,95
8934	81,70,95,89	84	-3	6	-2	88	85,95,85,85
1984	94,98	96	+9	3	+5	95	95,95
		88	(+1)		(+1)	91	
9592	85,75,89,92,82	85	-2	1	-2	88	85,90,95,85,85
8546	80,89,92	87	∅	1	+2	92	95,90,90
1129	77,87,98,96	90	+3	1	-1	89	90,95,85,85
		87	(∅)		(-1)	89	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
5080	m = 86						m = 85
6310	97, 85, 85, 83	88	+2	5	+3	88	85, 97, 85, 85
6632	89, 95, 79	88	+2	5	+2	87	90, 95, 75
2365	90, 88	89	+3	5	+3	88	90, 85
		88	(+2)		(+2)	87	
3566	75, 95	85	-1	2	-0-	85	75, 95
0972	78, 96	87	+1	2	+3	88	80, 96
5979	80, 72, 79	77	-9	2	-8	77	70, 80, 80
		82	(-9)		(-3)	82	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
0972	m = 86						m = 93
1489	92,93,94,87	92	+6	4	+1	94	95,98,90,93
9592	78,75,52,89	72	-14	4	-6	87	90,80,91
5979	88,91,82,95	89	+3	4	~	93	90,95,90,95
		89	(-2)		(-1)	92	
3735	80,97,76	84	-2	1	~	93	90,9592
8434	66,90,90	82	-7	1	~	93	95,95,87,94
5080	82,74,88,99	86	0	0	~	93	97,98,85
		84	(-2)		(~)	93	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
8434	m = 85						m = 91
0052	97,90,80,83	88	+3	9	+1	92	95,90,92,91
3735	92,90,87	90	+5	6	-1	90	93,90,88
6234	88,94,8883	88	+3	6	+2	93	95,94,86,95
		88	(+3)		(+1)	92	
0972	94,92,89,76	88	+3	ø	ø	91	93,93,91,87
6678	81,76	79	-6	ø	-4	87	85,89
1129	91,92,66,90	85	ø	ø	-2	89	90,92,92,83
		85	(ø)		(-1)	90	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
9592	m = 83						m = 88
6632	82,85,89	85	+2	6	+2	90	90,90,90
0052	85,90,89	88	+5	6	+3	91	90,93,90
1984	89,88,90	89	+6	6	+3	91	90,93,90
		87	(+7)		(+3)	91	
6678	80,87,74	80	-3	2	-2	86	80,90,88
1129	74,86	80	-3	2	-6	82	85,78
0972	84,75,88	82	-1	1	-4	84	90,85,78
		81	(-2)		(-4)	89	

	Scores from evaluation instrument	m	v	f	v	m	General impression scores
6147	m = 79						m = 88
2910	80, 65, 82, 83	78	-1	7	+4	92	95, 87, 93, 93
9223	77, 65, 91, 90	81	+2	5	+1	89	93, 95, 78, 89
8837	61, 71, 57, 89	70	-9	4	-7	81	90, 78, 72, 85
		76	(-3)		(-1)	87	
5979	80, 76, 82, 91	82	+3	2	+3	91	92, 95, 87
6632	63, 71, 76, 95	76	-3	1	+1	89	88, 99, 88, 87
3566	82, 89	86	+7	0	+1	89	88, 90
		81	(+2)		(+1)	90	

	Scores from evaluation instrument	m	v	f	v	m.	General impression scores
6678	m = 73						m = 87
0972	55, 71, 79	68	-5	9	-2	85	90, 80, 85
6310	65, 62	64	-9	6	-1	86	93, 85, 80
9223	78, 81	80	+7	6	+6	93	95, 90
		70	(-3)		(ø)	(87)	
3566	67, 64, 55	62	-11	3	-2	85	80, 85, 90
0052	65, 74	70	-3	3	+3	90	90
6632	100, 62	81	+8	2	+2	89	90, 92, 85
		70	(-3)		(ø)	(87)	